

## REMARKS

The Office Action mailed on October 20, 2004 has been carefully considered and the Examiner's remarks are appreciated. Claims 6-13 are cancelled. Therefore claims 3-5, and 16-24 are presented for examination. In response to the Office Action, Applicants respectfully request reconsideration in view of the following remarks.

### Allowable Subject Matter: Objection to Claims 6-13

The Examiner objected to claims 6-13 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants have adopted the Examiner's suggestion with previously presented and allowed claims 17-24. Claims 6-13 are now cancelled.

### Discussion of the Rejections Under 35 USC §102(b)

The Examiner rejected claims 3-5, and 16 under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,955,886 to Gourdine. It is respectfully submitted, however, that these rejections are inappropriate in view of MPEP §2131 for failing to either expressly or inherently describe each and every element as set forth in the claims. Gourdine, does not expressly or inherently describe or utilize a "*glow discharge ionizer*" or a "*glow discharge detector*" as required in Claims 3-5 and 16 of the present application. Instead, Gourdine utilizes corona discharges to effect ionization (col. 3, lines 7-11), as well as to effect detection (col. 7, lines 71-75). It is known in the art that corona discharges operate differently and under different conditions than DC glow discharges.

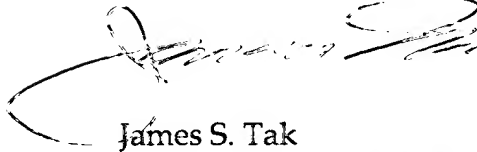
Unlike glow discharges which are relatively "cold" breakdowns, coronas are relatively hot breakdowns which can harm, e.g. destroy insulation. This is because corona discharges are within the Townsend dark discharge regime below a breakdown voltage threshold which separates from the glow discharge regime characterized by a substantial increase of current by a high factor, e.g.  $10^4$  to  $10^8$ . The Examiner is encouraged again to read the U.S. Pat. No. 6,457,347 to Koo et al, a reference cited in the present application, for a description of the detection methodology provided by such a glow discharge detector utilized in the present invention.

For the aforementioned reasons, it is respectfully submitted that independent claims 3 and 16 are allowable, especially as amended for clarification. And it is also submitted that claims 4 and 5 are also allowable as being dependent on allowable base claim 3. Furthermore, it is respectfully submitted that the allowability of independent claim 3 also overcomes the objections to dependent claims 6-13.

#### Summary

Applicant respectfully submits that claims 3-5 and 16-24 are in condition for allowance. Applicants respectfully request allowance of claims 3-5 and 16-24. In the event that the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, he is respectfully requested to initiate the same with the undersigned at (925) 422-7274.

Respectfully submitted,



Dated: February 22, 2004

By:

James S. Tak  
Attorney for Applicant  
Registration No. 46,367

Lawrence Livermore National Lab  
7000 East Avenue, L-703  
Livermore, CA 94550  
TEL: (925) 422-7274  
FAX: (925) 423-2231